

1 lead is substantially C-shaped. The amendment finds support in the Specification,
2 and no new matter has been added.

3 Claim 77 is amended to make clear that the recited pin is to guide the chip
4 package in the base. The amendment finds support in the Specification, and no
5 new matter has been added.

6 Claim 86 is amended to depend from claim 68 rather than the canceled
7 claim 69, and to make its terminology consistent with the amended claim 68. The
8 amendment finds support in the Specification, and no new matter has been added

9 **Specification**

10 The "Related Applications" section of the Specification has been amended
11 to update the priority of the application, as requested in the Office Action.

12 **Claim Rejections – 35 U.S.C. §112**

13 Claim 70 has been amended to depend from claim 74, and therefore now
14 includes the claim 74 element of the lead being substantially C-shaped, as
15 requested in the Office Action.

16 **The 35 U.S.C. § 102(e) Rejections**

17 The Examiner has rejected independent claim 68, and depending claims 69,
18 78, 79, 85, and 86 under 35 U.S.C. § 102(e) as being anticipated by Bellomo (US
19 5,419,712).

20 **Claim 68**

21 The Office Action argues, and the Applicants agree, that Bellomo
22 specifically discloses an integral (attached) module 36, and latching and protection
23 mechanism 40. [FIG. 5, and Col. 4 lines 26-29].

24 On the other hand, the amended claim 68 recites an assembly comprising 1)
25 packaging material with 2) a separate, specifically unattached, clip. In order to

1 support a §102 rejection, a reference must show every element of a claim, in the
2 exact manner claimed. Bellomo discloses only an integral (attached)
3 module/latching and protection mechanism, and not the assembly that has a
4 packaging material, and a separate clip to fit over the packaging material, as
5 recited by the Applicants. Therefore Applicants respectfully submit that Bellomo
6 does not anticipate Applicants' amended claim 68, and is therefore allowable.

7 Claims 69 and 78

8 The Applicants have cancelled claim 69.

9 The Applicants have cancelled claim 78.

10 Claim 79

11 Claim 79 is allowable by virtue of its dependency on base claim 68, as well
12 as additional limitations it contains.

13 The Office Action argues that Bellomo discloses a flexible (i.e. metal) lead.
14 Applicants find no reference in Bellomo to either a flexible lead, or to a metal lead,
15 and thus traverse. In Bellomo, the word "flexible" is written at only Col. 7 line 46
16 with reference to a backing spring; and the word "metal" is written at only Col. 5
17 line 7, and claims 2 and 15, each instance with reference to the backing spring.
18 Claim 79 is allowable for this reason.

19 Applicants respectfully submit that Bellomo does not anticipate Applicants'
20 claim 79, and is therefore allowable.

21 Claim 85

22 Claim 85 is at least allowable by virtue of its dependency on base claim 68.
23 Therefore, Applicants respectfully submit that Bellomo does not anticipate
24 Applicants' claim 85, and is allowable.

25 The 35 U.S.C. § 103(a) Rejections

1 Claims 70-75

2 The Examiner has rejected depending claims 70-75 under 35 U.S.C. §
3 103(a), as being unpatentable over Bellomo in view of Cutchaw (US 4,293,175).

4 Claims 70-75 are each allowable by virtue of their dependency on base
5 claim 68, as well as additional limitations they contain.

6 Applicants submit that there is no motivation, teaching, or suggestion to
7 combine Bellomo with Cutchaw. Applicants submit that claims 70-75 are
8 allowable for this reason as well.

9 Bellomo describes and portrays a connection system in which a module 36
10 has straight contact pads 34 "as known in the art" [FIG. 5, Col. 4 line 41]. A
11 circuit board has a contact housing 42 for receiving the contact pads 34. The
12 housing 42 has contacts 44 that specifically receive the contact pads 34. The
13 housing 42 has a backing spring 50 to press the contacts 44 against the pads 34,
14 and thus improve the electrical contact between the contacts 44, and the pads 34.

15 Cutchaw on the other hand describes a circuit package 92 mounted to a
16 circuit board (back panel) 94. The circuit package has edge contacts 98 about its
17 periphery. The edge contacts 98 have a loop portion, and an elastomeric material
18 110 interposed between the loops [Fig. 10] for maintaining alignment. In another
19 embodiment, the edge contacts 98 have a square ring-shaped portion, and an
20 elastomeric ring 110 interposed between the loops [Fig. 11] for resiliently
21 contacting terminal pads 106.

22 First, there is no suggestion or teaching in either Bellomo or Cutchaw to
23 combine Bellomo with Cutchaw. Second, there is no motivation to combine
24 Bellomo with Cutchaw. Bellomo describes a housing to receive the pads, while
25 Cutchaw describes leads directly contacting the circuit board. Bellomo describes

1 an inventive concept in which the circuit board base housing contacts have a spring
2 to further the contact between the pads (i.e. leads) and the base contacts, and
3 therefore has no interest in Cutchaw, which describes the leads resiliently
4 contacting terminal pads. Bellomo explicitly portrays his pads as being straight,
5 and explicitly states that his pads are "known in the art," thus clearly teaching
6 away from having a looped leads, and an elastomeric material between the loops,
7 to enhance a contact with the contacts. Applicants very respectfully submit that
8 holding that it is obvious to combine Bellomo with Cutchaw is an example of
9 picking and choosing a reference using hindsight. There is no motivation,
10 teaching, or suggestion to combine Bellomo with Cutchaw. Applicants
11 respectfully submit that claims 70-75 are allowable for this reason.

12 Applicants respectfully submit that claims 70-75 are not obvious over
13 Bellomo in view of Cutchaw, and are allowable.

14 Claim 77

15 The Examiner has rejected depending claim 77 under 35 U.S.C. § 103(a), as
16 being unpatentable over Bellomo in view of Taniguchi (US 5,451,815).

17 Claims 77 is allowable by virtue of its dependency on base claim 68, as well
18 as the additional limitations it contains.

19 The Applicants understand that a prior art chip has support pins to support
20 the chip on a board, and in fact pointedly discuss such a chip and its support pins
21 as prior art with reference to Applicants' FIGs. 1, 2, and 3. These prior art support
22 pins described by Applicants are similar to the pins described in Taniguchi.

23 However, Applicants' recite at least one pin, e.g. in an embodiment pins 445 446
24 (FIG. 4), to guide the packaging material in the base 410. This is not the support
25 pin to support a circuit on a board as described in Taniguchi. Applicants have

1 amended claim 77 to make clear that the recited pin is to guide the chip package in
2 the base. Claim 77 is allowable for this reason.

3 Therefore, Applicants respectfully submit that claim 77 is not obvious over
4 Bellomo in view of Cutchaw, and therefore is allowable.

5 Claims 80-83

6 The Examiner has rejected depending claims 80-83 under 35 U.S.C. §
7 103(a), as being unpatentable over Bellomo.

8 Applicants respectfully submit that claims 80-83 are allowable by virtue of
9 their dependency on base claim 68, as well as the limitations they contain.

10 Therefore, Applicants respectfully submit that claims 80-83 are not obvious over
11 Bellomo, and are therefore allowable.

12 Claims 87-88

13 The Examiner has rejected depending claims 87-88 under 35 U.S.C. §
14 103(a), as being unpatentable over Bellomo in view of Sonobe (US 4,636,022).

15 Applicants respectfully submit that claims 80-83 are allowable by virtue of
16 their dependency on base claim 68, as well as the limitations they contain.

17 Applicants respectfully submit that Sonobe (FIG. 5) does not portray a chip
18 package having a pocket as recited by Applicants in claim 87.

19 Instead, in Sonobe a circuit board 13, and not a chip package, has a side
20 conductor surface 13A (FIG. 3). The side conductor surface makes a flush contact
21 with a terminal 11. The Sonobe circuit board 13 has no pocket. Instead, any
22 opening possibly shown in FIG. 5 is a space between a cassette 10, the board 13,
23 and a housing 20. This possible space has no description in Sonobe and thus is
24 presumed that a solid here is unnecessary to hold Sonobe's cassette in Sonobe's
25 housing. This possible space in Sonobe has no relationship to a pocket in a chip

1 package as recited by Applicants in claim 87. Sonobe's electrical contact is a side
2 conductor surface 13A of the board. Sonobe nowhere describes extended leads,
3 compressed or not or any lead being disposed within a pocket, or compressed for
4 that matter, as recited by Applicants' in claim 88. Claims 87-88 are allowable for
5 these reasons.

6 Therefore, Applicants respectfully submit that claims 87-88 are not obvious
7 over Bellomo in view of Sonobe, and are therefore allowable.

8 CONCLUSION

9
10 Applicants respectfully request reconsideration of the rejection of these
11 claims in view of the above remarks. Applicants respectfully submit that claims
12 68, 70-75, 77, and 79-88 are not anticipated and not obvious over the cited
13 references, and thus are in condition for allowance. Should any matter in this case
14 remain unresolved, the undersigned attorney respectfully requests a telephone
15 conference with the Examiner to resolve any such outstanding matter.

16 Respectfully Submitted,
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ATTACHMENT

The Claims

In accordance with CFR § 1.121, a marked-up version of amended claims 68, 70, 74, and 86 showing all changes relative to the previous version of those claims is given below:

--68. (Twice Amended) A chip package assembly comprising:

packaging material having a first side, [and a] an opposed second side, a third side disposed between the first side and the second side, and an opposed fourth side disposed between the first side and the second side; and

a lead extending from the first side of the packaging material,
a separate[first] clip [portion extending from the first side of the packaging material]having a left connector portion, a right connector portion, and a bridge portion;

wherein in assembly
the left connector portion generally extends along the second side,
the right connector portion generally extends along the third side, and
the bridge portion generally extends along the fourth side, and
when the right connector portion and the left connector portion each mate with a base, the clip helps retain the packaging material in contact with the base by exerting a force on the fourth side.--

1
2 --70. (Amended) The chip package of claim 74[69], further comprising a flexible
3 insert residing between the lead and the first side of the packaging material,
4 wherein the flexible insert supplies spring force when the lead is compressed.--

5
6 --74. (Amended) The chip package of claim 68[70], wherein the lead is
7 substantially C-shaped.--

8
9 --77. (Amended) The chip package of claim 68, further comprising a [support]pin
10 extending from the packaging material to guide the chip package in the base.--

11
12 --86. (Amended) The chip package of claim 68[9], wherein the [first and second
13]clip[portions] is[are] flexible. --

14 **The Specification**

15 In accordance with CFR § 1.121, a marked-up version of the paragraph
16 under the "RELATED APPLICATIONS" heading on page 2 of the Specification
17 showing all changes relative to the previous version of the paragraph is given
18 below:

19 --This is a continuation of U.S. Patent Application Serial No. 09/468,247,
20 filed December 20, 1999, which is now U.S. Patent No. [_____]6,352,435,
21 and that US 6,352,435 is a division of U.S. Patent Application Serial No.
22 08/887,567, filed on July 3, 1997, now U.S. Patent No. US 6,007,357, which is a
23 continuation of U.S. Patent Application Serial No. 08/452,120, filed on May 26,
24 1995 now abandoned.--